we currently measure for ourselves for resale services.

In addition to that, we will negotiate any other performance measurements on unbundled network elements that the CLEC wishes to negotiate. We believe they are free to negotiate any kind of additional measurements, and if they are willing to pay for them we will put them in.

In no event do we believe that performance standards should be imposed upon a CLEC or an ILEC. They should be required. In fact, the CLEC should be required, if we do have imposed measurements, to provide accurate and detailed forecasts of their volumes.

We will, as we have been, continue to negotiate in good faith. We will work individually with CLECs and the industry to provide the interfaces and to provide the functionality that they require for their business.

Thank you.

MR. WELCH: Thank you, Elizabeth.

Wayne Fonteix from AT&T.

MR. FONTEIX: Good morning, and thank you for the opportunity to be here today to discuss these issues.

Unlike the three previous panelists, I will not begin with a baseball analogy. I will save that for my closing.

Yesterday's discussions and the earlier discussions this morning have made it clear that new

entrants are completely dependent upon the incumbents for their operation support systems for ordering and provisioning of both total services, resale and unbundled elements, including the combinations and the combination known as the platform.

Yesterday's panel also highlighted the fact that the Commission's decision and its Order to require parity of those interfaces was absolutely the right thing to do. Just about all parties seemed to agree on this parity standard. Nowhere is parity more important than in the ordering and provisioning fields.

Let's talk about parity for a short time. I ask you to consider parity from three perspectives. First, the assessment of parity. Parity cannot be determined without hard data about how the incumbent provides services and functionalities to itself and its customers vis-a-vis that which it provides to competing LECs. This is the issue around performance benchmarks and reporting.

Second, we all agree that the systems that the CLECs and the ILECs use to provide these OSS capabilities are sophisticated, and they cannot be integrated effectively without the full cooperation between two parties.

Third, given the way we know the ILECs operate today, parity simply cannot be achieved without the automated flowthrough of ordering and provisioning of

information.

Let's consider these issues in reverse order. Katheryn Brown yesterday encouraged the industry to develop performance standards based on what the customer wants. AT&T could not agree more strongly. We believe we know what the customer wants. Of course, each company in this room today believes the same thing. In fact, I am sure each company believes they know it better than anybody else in the room, and that is what competition is all about.

We all agree, though, that at a minimum the new entrants will need to be able to provide at least the same level of service to those customers, or we will not be able to win and retain those customers. This is where we come to a minimum parity standard for all competitors. It is not possible without the flowthrough of orders similar to the way the incumbents flowthrough their orders in their systems today downstream.

How do we achieve this seamless operation of systems? As these systems are integrated, it is essential that the ILECs work cooperatively with the CLECs and that no ILEC be allowed to unilaterally impose the standards for the interfaces nor the standards for the performance.

Standards in software are only part of the story. We also need to understand the significance of the business rules, the development and implementation of the business

rules, so that we know when we pass an order and we can build into our systems and the systems that support it on the ILEC side of the interface that if in fact the appropriate abbreviation of West Avenue is not W period but the full spelling of W-E-S-T that that order hits an edit before it ever goes through into the incumbent's systems.

We need to have that information up front. It needs to be on a parity basis in the edit similar to what the incumbent has in its own systems.

Cooperation is necessary in the context of both resale and unbundled elements, and at this point in the game we do not yet have developed agreed upon business rules nor processes for the ordering and provisioning on an automated basis of the combined unbundled network elements. As a result, electronic ordering of a platform is simply not yet available.

The ILECs alone will control the degree of difficulty that will be involved in taking the existing resale interface systems, enhancing them to support the unbundled elements and the unbundled elements in combination.

Finally, how do we know when we have achieved parity? The issue of measurements. Parity relies on hard data, hard and stable data; not assertions by one party, responses on the part of another, but established

performance measures with established performance targets that are stable.

The baseline in all cases is what the ILEC provides for itself, either in services or in comparable services where elements can find an analogous representation in services that are offered on a retail basis. The local competition user's group has in fact proposed a limited set, in the neighborhood of 24 measures, that can be applied across resale and unbundled network elements that we believe establishes a benchmark for parity.

The stability is an important issue, and let me give you an example of what I mean by the performance measures cannot be fungible. Ameritech has stated, and we agree, that they have instituted some measures for performance. However, those measures, in our assessment, do not capture parity and are not stable.

For example, over the course of April, of the orders that AT&T submitted to Ameritech for services resale that were submitted within the established standard interval for due dates, 15 percent of those orders Ameritech unilaterally changed the due date. This is not a stable measure.

Let me close with the analogy as proposed on baseball. We know in baseball between first base and second base is exactly 90 feet. It is 90 feet for the home team,

and it is 90 feet for the visitors. The base runner knows if he does not get there before the ball, he will be tagged out. The umpire will call that play. The 90 feet does not change.

If we do not have established and stable parameters for the benchmarks, think of a baseball game in which the home team can be running to second base, see the throw is going to beat them, and suddenly move the bag up to 75 feet, slide in and call themselves safe. We need the FCC to set those bases at 90 feet.

Thank you.

MR. WELCH: Thank you, Wayne. I am not exactly sure what I started here.

Pat Socci, do you want to try a crack at this baseball stuff?

MR. SOCCI: Well, I am from New York, so until the Yankees get hot you will not hear any baseball analogies from me, nor football, nor hockey, nor basketball. I am on the defensive this morning, Richard.

Good morning. My name is Patrick Socci, vice-president of MIS for Teleport Communications Group, TCG. We are the largest and the most experienced CLEC in the United States.

I am very pleased to be here today to speak to you about the roles that OSS can play in ordering and

provisioning of unbundled loops. As a facilities based CLEC with its own OSS, TCG's interests in the OSS of the ILECs is perhaps different from others represented here.

We see the ILEC OSS as simply a means by which the ILEC will meet its statutory obligations to provide interconnection and unbundled network elements to CLECs with the same level of quality and service that it provides to itself. We call this the performance parity principle, and it is fundamental to the development of local competition.

TCG already has its own OSS infrastructure. We have our own customer service representatives, our own network management centers, our own repair technicians and our own billing systems, so we neither want nor need unbundled OSS from the ILEC. On occasion, however, we may choose to purchase an unbundled loop from the ILEC, and we fully expect that the ILEC will process our order in a manner that represents the quality that is at least equal to that which the incumbent provides to itself.

Currently unbundled loops are primarily ordered and provisioned manually via fax machines and telephone conversations. When submitted an order, TCG generally must submit the order via facsimile. However, TCG can never be certain that the correct person received the order, that the transmission went through clearly, or even if the fax was ever delivered.

Even if such an order were correctly delivered, the ILEC recipient must re-key the information in their own OSS. Such a manual process with multiple failure points cannot be relied upon.

The current provisioning processes are also ineffective at delivering equal quality service from the ILECs. Instead of being able to check electronically on the status of installation and testing dates and testing results and capacity measurements, CLECs must telephone the ILEC and request the information verbally. Typically this could involve being put on hold and transferred several times until finally reaching someone who could answer the question. Again, manual processes are simply not up to the task.

If an ILEC could install our loops as quickly as it installs its own loops when we order via facsimile, so be it. If an ILEC could give us an installation status or an outage status information orally as quickly as it provides its own folks with the same information electronically, so be it.

TCG believes, however, that as order volumes increase, the ILEC's performance will only worsen. TCG believes that the ILECs will not be able to deliver equal quality without electronic bonding of the ILEC's OSS with the CLEC's OSS, and you can be certain the TCG will be

diligent in making sure that the ILECs meet their performance parity obligation.

In short, the performance parity principle demands, by whatever means, the ILEC must provide interconnection and unbundled elements in a manner that is at least equal in quality to that which the ILEC provides to itself. Parity must be provided for all stages of the interconnection and unbundled element delivery process, including ordering, provisioning, maintenance and repair.

It has been TCG's experience that the current processes do not provide such parity and that equal and nondiscriminatory interconnection and unbundled element access is only likely to be achieved through electronic bonding through CLEC and ILEC OSS systems.

Finally, it is important and indeed essential to recognize that the industry cannot simply say that the ILECs must deliver OSS bonding and once it is operational then all is well and the job is done. Effectively OSS processes are necessary for a variety of other essential network relationships to function effectively and fairly.

Electronic bonding of OSS systems means simply that the information can flow promptly and accurately between the CLECs and the ILECs. If the ILECs are delayed or inept in installing, maintaining or repairing unbundled elements, then the prospects for a robust and fair

competitive market will be diminished.

Thank you.

MR. WELCH: Thank you, Pat. In addition to all the carriers on the panel, we are fortunate to have a representative from a vendor today, Venkates Swaminathan.

MR. SWAMINATHAN: Thanks, Richard.

Being from where I am, I have to avoid the baseball analogies because I do not know baseball well enough, so I am going to keep away from it.

Thanks for inviting us to be part of this panel. What I will be talking about here in this statement is basically Telesphere Solution's point of view on some of these issues that have been raised here regarding operations support systems and their interconnection with a specific focus on ordering and provisioning issues.

Basically Telesphere's point of view on this issue starts from the premise that OSS interconnection is a matter for software to handle as far as possible and humans to be involved in as little as possible. We call these systems OSS interconnection systems.

At the platform level, Telesphere believes that ILEC and CLEC OSS interconnection systems should have certain critical features that will make OSS interconnection initiative successful. These features are technological fundamentals, we believe, to insure smooth, automated

exchange of information between ILECs and CLECs. They include six features.

The first and most important is scaleability. Scaleability is important so that as competition grows and order volumes increase, OSS interconnection systems are able to grow with them.

The second feature is transaction integrity. OSS interconnection systems must be able to insure especially for ordering and provisioning transactions that a transaction is either completed or entirely rolled back.

Third is integrated reporting. OSS interconnection systems must be able to produce reports indicating, for example, which orders were processed, why an order was rejected, what the average and maximum order processing times were by trading partner and order complexity, and what the availability of the OSS interconnection system was over a period of time.

Fourth is availability. OSS interconnection systems must be highly available to allow high levels of customer service.

Fifth is automated connections to internal ILEC and CLEC processes. We believe that this is very crucial to provide the kind of performance that is needed to create high service levels high enough for competition to be viable. This is important, we believe, both on the ILEC end

and the CLEC end. The connection to the internal operations of both systems must be automated as far as possible and involve human intervention as little as possible.

Sixth is support for multiple interface standards. The industry is using a variety of different interfaces right now, both in terms of data formats, as well as transport and in terms of application definitions. For example, there is electronic data interchange, there is the Web, there is ECLite, and they are all in use today for ordering and provisioning. Carriers need to be able to support multiple interface types on the same interconnection platform.

Specifically for resale and unbundled network elements, standards are being defined today by industry bodies like the ordering and billing forum and the telecommunications industry forum. We believe that use of such standards is critical in providing CLECs with a cost effective and manageable way to offer local service and in providing ILECs with clear guidelines on what they need to do.

Finally, I would like to make a point about independent software vendors like us. We believe that independent software vendors like Telesphere Solutions have a major role to play in this process. Products such as PowerGate, our run time and development environment for OSS

interconnection systems, are being used by a number of ILECs and CLECs to improve service levels and time to market.

In general, by leveraging infrastructure products focused on electronic communications for telecommunication service providers, vendors can substantially lower the cost of deploying OSS interconnection systems for both ILECs and CLECs and consequently create higher levels of automation and service.

Thanks.

MR. WELCH: Thank you.

Now we will turn to the next phase of the program, which is presenting the panelists with some questions. Hopefully we will get some back and forth among the panelists.

Stuart, let's start off with you. What types of electronic interfaces do you think meet the legal standards of Section 251 and the Commission's rules? Do these interfaces provide machine to machine interconnection such as flowthrough?

Based on your experience so far, what is your evaluation of the various methods of access of interfaces either in use now or proposed for ordering and provisioning activities in terms of their ability to provide nondiscriminatory access?

I can repeat some of those as we go along, if you

would like.

MR. KUPINSKY: I just want to remind everyone of the caveat I started out with.

MR. WELCH: Which was that?

MR. KUPINSKY: These are my comments and not the Department's.

I think you can start out as far as Section 251 is concerned with the two standards that the Commission articulated, and that is the nondiscriminatory access standard and the meaningful opportunity to compete standard.

If you apply those standards as you go through and consider the interfaces, you come out with different outcomes depending on which interfaces you are talking about and which CLECs you are talking about.

For example, a terminal emulation interface might be appropriate for smaller carriers. That type of interface, though it does not allow you to electronically transfer information from your OSSs to the interface or vice versa, may still be appropriate for a small carrier that does not have its own OSSs. This may provide nondiscriminatory access and a meaningful opportunity to compete.

I guess with regard to larger carriers who have their own OSS systems, this same sort of terminal emulation or GUI interface, that type of interface, may be

inappropriate because they are not able to populate their own databases at the same time as placing orders as the incumbent can.

For larger carriers, I think the proper way to interpret Section 251 and the Commission's rules is to require the more robust application to application interfaces such as EDI. We heard an excellent discussion of why the standardization of those interfaces is so important. For larger carriers, I think an application to application interface is the proper interface under the Commission's rules.

As far as the legal interpretation is concerned, I wholeheartedly agree with Liz that a combination of these interfaces is probably the way to satisfy one's obligations because if you have a combination of the terminal emulation or GUI interfaces and standardized application to application interface, you have sort of covered all your bases.

As far as the experience to date, I think what we have seen in the industry and what I have seen is that the introduction of manual processing in its various forms at any stage of the ordering process introduces significant problems. There is the potential for significant errors and delays in processing orders and provisioning resale services and unbundled network elements.

I think I would disagree with the panelists that suggested that the flowthrough is only important with regard to the interface. As I said in my opening comments, I think you have to look at both pieces of this puzzle.

We have seen some very specific experience in the industry that manual intervention on the back end after the interface has done its job and delivered orders can have cataclysmic results on the efficient delivery of resale services and unbundled elements.

If there is any manual intervention between a CLEC's OSSs and the incumbent's OSSs, you have the potential for introducing errors and delays.

MR. WELCH: Thanks.

Would any of the other panelists like to respond to that?

MS. HAM: I would.

MR. WELCH: Elizabeth?

MS. HAM: Thank you.

As I said in my opening statement, we believe that we have met the requirement. We also agree with Stuart. We do not want manual processes in Southwestern Bell. They are expensive on the human size, and we agree that any type of fallout may delay the process.

We also are working diligently to flowthrough as much of the EDI application to application transactions and

capabilities as possible. What we have done is to focus on the high volumes. There will be some manual fallout and some manual handling on unbundled network elements because that does not, at least in our market, seem to be where the high volume is currently. The high volume is in resale, whether you are using an EDI Gateway or whether you are using our proprietary interface.

There are certain orders that we do not process for ourselves in a mechanized environment. They are manual. When we do develop a mechanized process for any of those order types for our own retail operations, we will pass along the same capabilities to the CLECs who are using our proprietary interfaces.

MR. WELCH: I am going to turn to Kalpak Gude to ask the next question, please.

MR. GUDE: This is directed initially at least at Charlotte.

Please discuss how your state has addressed the pricing issues for OSS access for various resold services and network elements. Are costs of OSS included within the charges for those services and elements, or have you approved separate charges for electronic interfaces and OSS access?

MS. TERKEURST: Luckily Kalpak had told me he was going to ask me this question, so I worked with my staff

over the last day or two trying to come up with the best answer to that that we could.

There are a lot of different ways in which the costs of OSS are being handled in Illinois. We did have a completed docket on pricing of resale services, and the pricing has been established for them. Basically the costs of OSS were considered in establishing the net cost in the resale formula, so it was factored into the existing rate structure of wholesale services.

There is a service ordering charge. It is different than the service ordering charge for a retail service, and part of the difference reflects the cost of the OSS. That is my understanding of how that works.

MR. LENAHAN: Can I clarify?

MS. TERKEURST: Yes.

MR. LENAHAN: Again just to divide the OSS into two pieces, the interface cost is the cost that was included in the wholesale rate. The computer cost of maintaining the Legacy systems is the cost of running the business and would be recovered in the retail rates generally.

It is the unique cost of implementing an EDI Gateway, etc., etc., but that is a small portion of the cost of maintaining the electronic Legacy systems.

MS. TERKEURST: So the formula starts with the retail rates, subtracts out the costs that are saved as a

result of it being a wholesale service offering, and then adds back in the additional costs that are created by the OSS and other costs of operating in the wholesale environment.

On the unbundled network elements side, we established interim rates in the arbitration dockets and are in the process now of litigating a case that will establish permanent rates for Ameritech. How you handle OSS costs is an issue in that case.

Ameritech is proposing prices for service ordering and other rate elements that are based on their view of the cost of providing OSS. Other parties are arguing that the costs that Ameritech are proposing are too high.

For example, Ameritech's costs are based on the ASR interface that requires manual intervention. The parties are arguing that the service ordering costs should be based on an EDI type interface that would, in their view, have much lower costs than the ASR interface. That is it in a nutshell. It is still pending.

MR. WELCH: Pat or Wayne, would you like to comment on the pricing at all? Do you have any thoughts?

MR. FONTEIX: I am not personally familiar with the litigated case that Charlotte just referenced, but I did want to make clear that AT&T's position is where there are costs incurred in transacting business, obviously in a

typical commercial relationship that cost is recovered in the supplier charges to the customer.

Where we disagree is in the notion that all the costs required or incurred in establishing the interfaces to support competition are borne by the competitors alone.

MR. WELCH: Pat?

MR. SOCCI: TCG changed the focus a little bit. We are more concerned with the overall process. You can have an EDI interface, but what happens beyond that? The net result, we believe, is you monitor from beginning to end what is the on time performance.

For example, last week on time performance with the ILECs was 35 percent for circuit turn up and testing, whereas by our own standards it is at least 95 percent. Anything below 95 percent, you have a lot of explaining to do internally.

Our focus is not just the EDI interface, but rather what is the performance of the overall process. Are the circuits turned up on time? Are the circuits provisioned properly? Do they work the first time? Do they work right the first time, or is there a lot of rework?

EDI and interfaces and GUIs, and I love the technology because I am a technologist, but the net result is I do not think we should fall in love with the technology, but look at the overall process and what is the

performance because that is what ultimately determines whether we have effective local competition or not.

MR. WELCH: Charlotte?

MS. TERKEURST: There is one more thing that I forgot to mention that is a big component in determining how these costs should be assessed is the anticipated demand over which you spread the start up costs. The numbers in the pending case can range. The end result can vary by a factor of ten just based on what kind of demand assumptions you are using.

MR. WELCH: Wayne, if I could ask you to address this question, please?

At AT&T, what interfaces have you tested or used? Which specific interfaces seem most satisfactory? Which are the least satisfactory? If you could, please describe the problems associated with the interfaces.

MR. FONTEIX: We are in the process of testing several interfaces around the country. As you know, we are in the market in California. We are in the market in Illinois and Michigan. We are in the market in Connecticut. We are in the process of testing interfaces with pretty much all of the other incumbent RBOCs with the exception generally of U.S. West right now.

We have recently begun EDI testing with some Western Bell. We are pursuing, as has been stated before,

some testing of interfaces at a very initial stage for the unbundled platform with Ameritech.

The bottom line here is on the EDI interfaces, which clearly is AT&T's interface of choice as a large volume carrier, these interfaces and where they are being implemented today, and they are at the very early stages of implementation, are just in the initial stages of testing in limited cases.

We have still ongoing discussions to try to close on the business rules I referred to. We understand the pipe. We understand the interface on the pipe. We need to have the business rules on either end of that pipe established so that we do not pass orders that get rejected because we do not have comparable edits on our end of the interface to what the incumbent has. There is a lot of work to be done on that as well. It is not simply the interface, but the rules surrounding it.

Stuart is absolutely right in regard to the large carriers and the use of the proprietary interfaces or the Web/GUI interfaces. It puts us in the position of having to do double entry into our systems, as well as directly into the Legacy systems or into the Web/GUI interface. Literally at any kind of volume, that is not efficient.

Unquestionably, EDI is our interface of choice, and we are in the very early stages of testing that.

MR. WELCH: Does anyone have anything to add to that?

Elizabeth?

MS. HAM: Yes, just one thing. AT&T is also testing in our market our proprietary interface for residential resale services. That testing began this month. From what I am hearing from both the AT&T operations side and our operations people is that the test is going very well.

As to any kind of implementation, there are start up issues that you have with any issue, but we feel that we have a good test going. I think it is to the credit of AT&T that they have done sufficient training on our proprietary interface prior to beginning the trial and using the system.

MR. FONTEIX: Could I just add one point? We are absolutely pursuing a test to implement the consumer areas with Southwestern Bell, which may seem to be in conflict with our standard objective of moving to EDI interface.

This is an issue of timing. We have a very, very strong parity to get into the market yesterday. The EDI interfaces are not ready to support that market entry today. We need to take what is available on that basis such as the proprietary basis to accomplish market entry today with the stated need to move to a parity basis on EDI.

MR. LENAHAN: I would like to add one thing and

encourage AT&T in those markets where it is entered in Illinois and Michigan. I think they are beyond testing, and they are into commercial sales. If they would accelerate their testing and use some pre-ordering, the quality of the orders they are able to submit would improve dramatically. We would encourage AT&T to start using the pre-ordering interfaces that are in place.

MR. WELCH: Pat?

MR. SOCCI: Yes, Richard. Just a little back drop.

We do a reasonable amount of business with the interexchange carriers. We are the vendor. They are the customer. We provide the local loop. We have built interfaces to all the interexchange carriers. Since we are the vendor and they are the customer, obviously we have to meet their needs. It is American capitalism at its finest.

We find now where we are interacting with the ILECs, they are the vendor, and we are the customer, but yet we have to adhere to their requirements. The paradigm has broken down.

The net result is we are playing around with various ILECs, with dialogue interfaces, Internet access interfaces. They are all very costly, not so much from the interface aspect, but the additional human resource because now they have essentially broken every single process that

we have in our company for ordering, provisioning, maintenance and repair.

We now have to have a special group of people to deal with these special interfaces. They vary from ILEC to ILEC to ILEC. In essence, they have broken all of our processes, and it is very expensive.

I agree with AT&T. EDI is really the way to go, but our position is we look at the overall process. Whatever will give us effective competition in the local markets at least cost, that is what we will be happy to do.

MR. WELCH: Venkates, if I could ask you to look into the future and do a little predicting here?

What can we expect incumbents to do in the near term, for example, the next six months, to obtain ordering and provisioning? Are the methods of access available today likely to be long term solutions to the telecommunications industry needs as it moves to a more competitive environment? What trends or innovations can you predict as likely or desirable for the industry over the upcoming years?

MR. SWAMINATHAN: Good question. Several points about that.

First of all, before I get to the specifics of the question, I just want to say one other thing. There is a common assumption made that if an ILEC provides a GUI for a